Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-4. (Canceled)

5. (Previously Presented) A method for use in encoding input video data, comprising:

determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters;

using said metric function to generate metric values from said input video data and respective second encoding parameters;

selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship; and

under control of at least one of a configured hardware circuit and a configured computer, encoding said input video data using the selected at least one encoding parameter,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v} \frac{|f(u,v)|}{w(u,v)q(u,v)}$, where $f(u,v)$ is a discrete cosine transformation coefficient of a block element with coordinates (u, v), $w(u,v)$ is a weight for said coefficient, and $q(u,v)$ is a quantization parameter for said coefficient.

6. (Previously Presented) A method as claimed in claim 5, wherein said relationship is a power law relationship.

7. (Previously Presented) A method as claimed in claim 5, wherein said metric function is based on AC coefficients of discrete cosine transformation data generated from said video data.

8-9. (Canceled)

10. (Previously Presented) A method for use in encoding input video data, comprising:

determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters;

using said metric function to generate metric values from said input video data and respective second encoding parameters;

selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship; and

under control of at least one of a configured hardware circuit and a configured computer, encoding said input video data using the selected at least one encoding parameter,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v} \frac{|f(u,v) * h(u,v)|}{w(u,v)q(u,v)} =$, where *f*(*u,v*) is a discrete cosine transformation coefficient of a block element with coordinates (*u, v*), *w*(*u,v*) is a weight for said coefficient, *q*(*u,v*) is a quantization parameter for said coefficient, and *h*(*u,v*) is a spatial weighting factor for said coefficient.

11. (Previously Presented) A method as claimed in claim 5, wherein metric values are determined for each 8x8 pixel block of said video data using said metric function.

12. (Original) A method as claimed in claim 11, including determining a metric value for a macroblock by summing metric values for the constituent 8x8 pixel blocks.

13. (Previously Presented) A method as claimed in claim 5, including determining basic metric values from said metric function and basic encoding parameters, and deriving metric values from said basic metric values.

14. (Original) A method as claimed in claim 13, including deriving said metric values from said basic metric values using shift and add operations.

15. (Withdrawn) A method as claimed in claim 5, wherein said metric function is based on the number of non-zero AC discrete cosine transformation coefficients after quantization.

16. (Withdrawn) A method as claimed in claim 15, wherein said metric function is used to determine metric values for a macroblock of six 8x8 pixel blocks.

17-24. (Canceled)

25. (Previously Presented) A video encoding module for use in encoding input video data, comprising:

means for determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said

reference video data using said respective first encoding parameters, during a calibration process;

means for storing said relationship;

means for using said metric function to generate metric values from said input video data and respective second encoding parameters; and

means for selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v} \frac{|f(u,v)|}{w(u,v)q(u,v)}$, where $f(u,v)$ is a discrete cosine transformation coefficient of a block element with coordinates (u, v), $w(u,v)$ is a weight for said coefficient, and $q(u,v)$ is a quantization parameter for said coefficient.

26. (Previously Presented) A video encoding module for use in encoding input video data, comprising:

means for determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters, during a calibration process;

means for storing said relationship;

means for using said metric function to generate metric values from said input video data and respective second encoding parameters; and

means for selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v} \frac{|f(u,v) * h(u,v)|}{w(u,v)q(u,v)}$, where $f(u,v)$ is a discrete cosine transformation coefficient of a

block element with coordinates (*u, v*), *w*(*u,v*) is a weight for said coefficient, *q*(*u,v*) is a quantization parameter for said coefficient, and *h*(*u,v*) is a spatial weighting factor for said coefficient.

27-29. (Canceled)

30. (New) A video encoding module, comprising:

a memory configured to store a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding the reference video data using the respective first encoding parameters, the relationship determined during a calibration process;

a predictor module configured to use the metric function to generate metric values from input video data and respective second encoding parameters; and

a selector module configure to select at least one of the second encoding parameters on the basis of a desired quantity of encoded video data and the relationship,

wherein the metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v} \frac{|f(u,v)|}{w(u,v)q(u,v)}$, where *f*(*u,v*) is a discrete cosine transformation coefficient of a block element with coordinates (*u, v*), *w*(*u,v*) is a weight for the coefficient, and *q*(*u,v*) is a quantization parameter for the coefficient, and

wherein the video encoding module further includes at least one of a dedicated hardware circuit configured to implement the predictor module, and a processor configured to execute the predictor module.

31. (New) The video encoding module of claim 30, wherein said relationship is a power law relationship.

32. (New) A video encoding module, comprising:

a memory configured to store a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding the reference video data using the respective first encoding parameters, the relationship determined during a calibration process;

a predictor module configured to use the metric function to generate metric values from input video data and respective second encoding parameters; and

a selector module configure to select at least one of the second encoding parameters on the basis of a desired quantity of encoded video data and the relationship,

wherein the metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form, $\sum_{u,v}\frac{|f(u,v)*h(u,v)|}{w(u,v)q(u,v)}$, where $f(u,v)$ is a discrete cosine transformation coefficient of a block element with coordinates (u, v), $w(u,v)$ is a weight for the coefficient, $q(u,v)$ is a quantization parameter for the coefficient, and $h(u,v)$ is a spatial weighting factor for the coefficient, and

wherein the video encoding module further includes at least one of a dedicated hardware circuit configured to implement the predictor module, and a processor configured to execute the predictor module.

33. (New) The video encoding module of claim 32, wherein metric values are determined for each 8x8 pixel block of said video data using said metric function.

34. (New) A method, comprising:

determining a relationship between first metric values and respective quantities of encoded video data, the first metric values generated by encoding

reference video data from a reference video using a metric function and respective first encoding parameters;

after determining the relationship, under control of a video encoder that is at least one of a configured hardware circuit and a programmed computer:

receiving an input video distinct from the reference video;

generating second metric values from input video data of the input video using respective second encoding parameters;

selecting at least one of the second encoding parameters based on a desired quantity of encoded video data and the relationship between the first metric values and the respective quantities of encoded video data; and

encoding the input video data using the selected at least one encoding parameter.

35. (New) The method of claim 34 further including, after the determining the relationship between first metric values and respective quantities of encoded video data and before receiving the input video, storing the relationship for use in the selecting at least one of the second encoding parameters based on the desired quantity of encoded video data and the relationship.

36. (New) The method of claim 34 wherein the determining the relationship between first metric values and respective quantities of encoded video data is performed as part of a calibration process, and wherein the receiving the input video occurs after the calibration process is performed.

37. (New) The method of claim 34, wherein the relationship is a power law relationship.

38. (New) The method of claim 34, wherein the metric function is one of at least:

based on AC coefficients of discrete cosine transformation data generated from video data, and

a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients.

39. (New) The method of claim 34, further comprising:

determining basic metric values from the metric function and basic encoding parameters; and

deriving metric values from the basic metric values.

40. (New) The method of claim 39, wherein the deriving metric values includes deriving the metric values from the basic metric values using shift and add operations.

41. (New) The method of claim 34, wherein the selecting the at least one of the second encoding parameters based on a desired quantity of encoded video data and the relationship between the first metric values and the respective quantities of encoded video data is performed using the second metric values.

42. (New) A video encoding module, comprising:

a memory configured to store a predetermined relationship between first metric values and respective quantities of encoded video data, the predetermined relationship being determined during a calibration process and based at least in part on generating the first metric values from reference video data of a reference video using a metric function and respective first encoding parameters, and generating the respective quantities by encoding the reference video data using the respective first encoding parameters;

a predictor module configured to receive input video data from an input video, the input video distinct from the reference video, and to generate second metric values from the input video data using the metric function and respective second encoding parameters; and

a selector module configured to select at least one of the second encoding parameters based on a desired quantity of encoded video data and the stored predetermined relationship,

wherein the video encoding module further includes at least one of a dedicated hardware circuit configured to implement the predictor module, and a processor configured to execute the predictor module.

43. (New) The video encoding module of claim 42, wherein the predetermined relationship is a power law relationship.

44. (New) The video encoding module of claim 42, wherein the metric function is one of at least:

based on AC coefficients of discrete cosine transformation data generated from video data, and

a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients.